Xtremix

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“It breaks the old paradigm of music before dance.” Adam Lerer

The Big Picture

• Controlling music with motion

• You can dance if you want to

http://www.midway.org/af/cf/%7BF2639556-5527-41A0-B327-5DAF8D139628%7D/Dancing%20Boy.jpg
The Block Diagram

- Accelerometer Data In
- Gyroscope Data In
- Gesture System
- Gesture Code: 5
- Audio System
- Music In
- Better Music Out
The Gesture System

Left Gyroscope
Right Gyroscope
Left Accelerometer
Right Accelerometer

A/D
Rotation Decoder
Lateral Motion Decoder
Effect Lookup Table

Left Rotation
Right Rotation
Left Translation
Right Translation

Gesture Code
The Gesture Bank

- Volume control
- Frequency filter
- Clip insertion
The Audio System

2. http://www.students.niu.edu/~z140184/website/music%20notes.gif
The Filter Bank

Z-Transform Filters

\[ y[n] + b1\cdot y[n-1] + \ldots = x[n]\cdot a0 + x[n-1]\cdot a1 + \ldots \]

1. http://ac3filter.net/doc/ac3filter/pic/a_signal.png
Conclusion